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ABSTRACT

This Child Development Associate (CDA) training module is intended to teach CDA interns how to select, plan and implement a science project appropriate for preschool children. The trainee is also expected to learn about preschool children's cognitive skills and how to foster their development. Both teacher and trainee materials are provided in the module. Teacher's materials consist of directions for pre-testing and field supervision, a resource person activity list, and guides for each student activity. Trainee materials include pre- and post-tests, an activity record, a glossary, directions and 12 lessons. (Author/RH)

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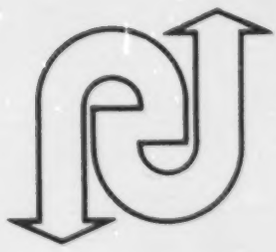
CHILD DEVELOPMENT ASSOCIATE TRAINING PROGRAM

UNIT III

DEVELOPMENT OF COGNITIVE SKILLS IN YOUNG CHILDREN

Module 3

BEGINNING SCIENCE DEVELOPMENT WITH YOUNG CHILDREN



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THE CHILD DEVELOPMENT ASSOCIATE TRAINING PROJECT

UNIT III

DEVELOPMENT OF COGNITIVE SKILLS IN YOUNG CHILDREN

MODULE 3

BEGINNING SCIENCE DEVELOPMENT WITH YOUNG CHILDREN

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A Joint Project of: Community College of Philadelphia
Research For Better Schools, Inc.
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UNIT III

DEVELOPMENT OF COGNITIVE SKILLS IN YOUNG CHILDREN

Overview

of

Module 3

BEGINNING SCIENCE DEVELOPMENT WITH YOUNG CHILDREN

Purpose of Module

This module is about science and the development of cognitive skills in science. The trainee learns about the different aspects of science in relation to the preschool child. The trainee also learns about some of the cognitive skills and how to foster their development in a science context.

Unit III

Module 3

COMPETENCY

The trainee will be able to select, plan and implement a science project appropriate for preschool children.

INSTRUCTIONAL OBJECTIVES

Entry Level

The trainee will know what science for a preschool child is.

The trainee will know what skills the child should acquire for understanding science.

The trainee will know what a science project for a preschool child is and what it involves.

Intermediate

The trainee will know why science is important for a preschool child.

INSTRUCTIONAL OBJECTIVES (cont.)

The trainee will know why the skills are important and how to develop a plan for a project to teach them to preschool children.

The trainee will know why projects are important for preschool children and how to plan and prepare for implementing it.

MASTERY

The trainee will be able to implement the teaching of a planned science project for preschool children.

Unit III

Module 3

BEHAVIORAL OBJECTIVES

Entry Level

Given a set of science resource books, the trainee will be able to select, identify and write the major ideas appropriate for preschool children to learn.

Intermediate Level

Given a science topic, the trainee will be able to plan a science project appropriate for a preschool classroom.

Mastery Level

Given a plan for a science project, the trainee will be able to teach a lesson, activity, and environmental condition appropriate for carrying out the science project plan.

Unit III

Module 3

PRETEST

If ... you think you may already know how to do the things in this module:

1. See the Resource Person and describe why you think you may already know to do these things.

2. Review the Pretest with the Resource Person and decide with the Resource Person if you will try it.

If ... you do not wish to take the Pretest, or do not know how to do these things:

1. Fill out the Cover Sheet for this Module.

2. Read the Glossary.

3. Begin work on Activity 1.

Unit III

Module 3

Module 3

BEGINNING SCIENCE DEVELOPMENT WITH YOUNG CHILDREN

Trainee: _____

Instructor: _____

Field Supervisor: _____

	How Many?		
Class Sessions		Community College of Philadelphia	Regularly Scheduled Class Day
Field Visits		At Your Center	Time to Be Scheduled With The Field Supervisor

Unit III

Module 3

Resource Person Directions

PRETEST

DIRECTIONS

1. Be familiar with the entire pretest especially Part One.

2. Trainee has three hours to complete Part One.

3. Trainee cannot go on to Part Two until you have reviewed Part One and the trainee has at least 40 points

4. See Answer Key for correct answers to sections A and B of Part One, the number of points for each correct item, and the number of points available for Part One.

5. If a trainee has a minimum of 40 points, tell her to go on to Part Two and notify her Field Supervisor that she is working on Part Two of the Pretest.

6. Give the trainee who is going on to Part Two, two sheets of paper and some file cards.

Unit III

Module 3

Resource Person Directions

Pretest

7. If a trainee has a score below 40 points for Part One, tell the individual that he will have to work in the module.

8. The Field Supervisor will contact you after she has finished observing the trainee in Part Two. The Field Supervisor will give you the trainee's score for Part Two (See Field Supervisor directions for scoring of each item in Part Two.)

9. Add the total score from Part One to the total score for Part Two to get a score for the entire Pretest.

   - Trainee must have a score of 90 or above to have mastered the Pretest.

10. Trainees who have mastered the Pretest should be instructed to go on to the next module.

Pretest (cont.)

11. Trainee's who have a score less than go should be instructed as to what they will need to work on in the module.

Unit III

Module 3

Resource Person Directions

PRETEST

ANSWER KEY

PART ONE

A. Matching

1. - F
2. - A
3. - D
4 - B
5 - C
6 - G

* Total number of points for A - 12 - each correct item = 2 points

Resource Person Directions

Pretest (cont.)

Answer Key (cont.)

B.

1. The area selected should be one of the four on the chart. No Points

2. The topic selected should be one of the four on the chart. No Points

3. The Plan for a Science Project must include:

   A. List of things that children need to know about the topic. 5 Points

   B. The list of objectives must include content objectives and science skill objectives that are related to Item A. (Consult Activity 4 for explanation of same) 5 Points

Resource Person Directions

Pretest (cont.)

Answer Key (cont.)

C. Two lesson plans that are clearly about the topic and related to the objectives.	8 Points; No Partial Credit
D. Two activities that are directly related to the topic and the objectives.	8 Points; No Partial Credit
E. Two plans for planning the environment that are directly related to the topic and the objectives.	8 Points; No Partial Credit

* Total number of points for B-34

** Total number of points for Part One - 46

Unit III

Module 3

Field Supervisor Directions

PRETEST

DIRECTIONS

1. Be familiar with the entire pretest, especially Part Two.

2. Trainee has seven days to complete this part of the Pretest.

3. Resource Person will notify you of trainees who have done well in Part One and who are allowed to go on to Part Two.

4. When the trainee contacts you, set up a time to visit the individual at their center.

5. Arrange a separate time to visit for observing a lesson, an activity and an environmental condition.

6. The trainee should have available for you:

Unit III

Module 3

Field Supervisor Directions

A. The objectives for the science project and the lesson plan when you go to observe the lesson;

B. The objective and activity card when you observe the activity;

C. The objectives and environmental condition card when you observe the environment.

7. The criteria for mastery of the lesson are:

A. The lesson is appropriate for the science project;

B. The lesson is appropriate for one or more of the objectives for the science project;

C. The lesson was well planned and prepared;

Pretest (cont.)

D. The lesson was carried out according to plans.

(* Item #7 is worth 18 points; no partial credit!)

8. The criteria for mastery of the activity are:

A. The activity is appropriate for the topic;

B. The activity meets one or more of the objectives for the science project;

C. The activity was well prepared and planned:

D. The activity was carried out according to the activity card.

(* Item #8 is worth 18 points; no partial credit!)

Unit III

Module 3

Field Supervisor Directions

Pretest (cont.)

9. The criteria for mastery of the environmental conditions are:

   A. The environmental condition is appropriate for the topic;

   B. The environmental condition meets one or more of the objectives for the science project;

   C. The environmental condition was well prepared and planned;

   D. The environmental condition was carried out according to the environmental condition card.

(Item #9 is worth 18 points; no partial credit)

Field Supervisor Directions

Pretest (cont.)

* Trainee must meet all the criteria for each item (7,8,9) to receive the number of points for that item.

** Total number of points for Part Two - 54

10. Notify the Field Supervisor of the trainee's performance in Part Two and the total number of points received for this part of the Pretest.

Unit III: Development of Cognitive Skills in Young Children

Module 3: Beginning Science Development with Young Children

NAME _____

DATE _____

PLACEMENT TEST

Time Started _____

Time Finished _____

Mastery _____

No Mastery _____

Resource Person _____

Unit III

Module 3

Trainee Directions

PRETEST

DIRECTIONS

1. This pretest is divided into two parts.

2. You are to read the directions and do Part One.

3. When you have finished Part One, give it to your Resource Person. Do not go on to Part Two until your Resource Person tells you to do so.

4. When your Resource Person gives you permission, read the directions and do Part Two.

Unit III

Module 3

PRETEST

This pretest is divided into two parts: Part One and Part Two. Read the directions and do part one. Do not go on to part two until your Resource Person tells you to.

PART ONE

You will have three hours to complete this part of the pretest. When you have finished part one, give it to your Resource Person.

A. Matching

Read the phrases in Column A and Column B. Match the phrase in Column A with the correct phrase in Column B. Write the letter of the correct phrase in Column B in the blank on the left of the phrase that it matches in Column A.

Pretest (cont.)

_____1.	Science is	A. by learning to observe, to experiment and to predict.
_____2.	Preschool children learn about things in science	B. a plan for organizing lessons, activities, environmental conditions based on one theme or topic and implementing it.
_____3.	Preschool children learn most things	C. says what you want children to learn about the topic.
_____4.	A science project is	D. by seeing, touching, smelling, and hearing
_____5.	A content objective	E. says what you want the children to be able to develop cognitively while they are doing that project.
_____6.	A science skill objective	F. an attempt to understand the things that exist or happen in the world around us.
		G. says what you want the children to be able to do when they have finished learning about the project.

Pretest (cont.)

Below is a chart of four areas that are seen as a part of science. Under each area is listed the topics that are involved in that area. Look at the chart.

STARS AND UNIVERSE	EARTH'S CRUST	LIVING THINGS	MATTER AND ENERGY
. sun and earth	. rocks	. plants	. sound
. day and night	. weather	. animals	. energy
. stars and earth	. seasons	. people	. magnetism
. moon and earth	. bodies of water		. machines

Your task is to do the following:

1. Select an area and write it on Sheet #1.

2. Select one of the topics listed under the area you picked and write it on Sheet #1.

3. Using the topic you have selected, write a plan for a science project that will take two weeks to do with preschool children.

Pretest (cont.)

4. Your plan should include:

   A. A list of all of the things you want children to know about the topic;

   B. Objectives;

   C. Two lesson plans for lessons about the topic;

   D. Two activities about the topic;

   E. Two plans for planning the environment around the topic;

   F. Three ways you can teach and talk about the topic during the non-instructional parts of the day. List the non-instructional parts of the day you would use.

5. Write your plan on the sheets included in this pretest.

Pretest (cont.)

6. When you have finished all of the above, turn in part one to your Resource Person.

DO NOT GO ON TO PART TWO UNTIL YOUR RESOURCE PERSON TELLS YOU TO DO SO!

Unit III

Module 3

Pretest (cont.)

#1

1. SCIENCE AREA: _____

2. SCIENCE TOPIC:

3. MY PLAN FOR A SCIENCE PROJECT:

Pretest (cont.)

#2

Pretest (cont.)

#3

Pretest (cont.)

#4

Unit III

Module 3

Pretest (cont.)

#5

Pretest (cont.)

#6

Pretest (cont.)

PART TWO

You will have seven days to complete this part of the pretest.

You are going to be observed teaching a lesson, providing an activity, and arranging the environment for the project you planned in part one.

Get two sheets of paper and two cards from your Resource Person and do the following:

1. Copy one of the lesson plans that you wrote in part one on a sheet of paper.

2. Copy one of the activities and one of your plans for arranging the environment from part one on the cards.

3. Copy your list of objectives from part one on a sheet of paper.

Pretest (cont.)

You will need these things:

Schedule a time with your Field Supervisor when she can see you teaching a lesson for the project. Give her your objectives list so that she can see what objective you are teaching for and your lesson plan so she can see if your lesson is going the way you planned it.

Schedule another time for your Field Supervisor to observe you providing an activity for your project. Again, have your objectives list available and also your activity card.

Schedule another time for your Field Supervisor to observe you arranging the environment for your Science Project. Have your objectives list and environmental condition available for her.

Also have your calendar available so your Field Supervisor will know what other lessons, activites and environmental conditions have been carried out or will be carried out. This will give her an idea of what other things are planned in relation to what she is observing.

Pretest (cont.)

Make sure you let your head teacher or center director know what you have to do!

Unit III

Module 3

Resource Person Activity List

ACTIVITY	ESTIMATE TIME FOR COMPLETION	MATERIAL	EQUIPMENT
1. Module Overview		Activity Folder U3-M3-A1	
2. An Introduction to Science For Preschool		Activity Folder U3-M3-A2	
3. How To Start To Plan Your Science Project For Preschool Children		Activity Folder U3-M3-A3	
4. Learning The Content For Your Project		Activity Folder U3-M3-A4	
5. Writing Objectives For Your Science Project		Activity Folder U3-M3-A5	
6. Writing Lesson Plans For Science Project		Activity Folder U3-M3-A6	
7. Writing Activity Cards For Your Science Project		Activity Folder U3-M3-A7	Activity Cards
8. Writing Environmental Conditions Cards For Your Science Project		Activity Folder U3-M3-A8	Environmental Conditions Cards

Unit III

Module 3

ACTIVITY	ESTIMATE TIME FOR COMPLETION	MATERIAL	EQUIPMENT
9. Checking Everything Out		Activity Folder U3-M3-A9	Activity Cards Environmental Conditions Cards
10. Thinking About Informal Learning Experiences For Your Science Project		Activity Folder U3-M3-A10	
11. Preparing To Begin Teaching Your Science Project		Activity Folder U3-M3-A11	
12. Mastery Teaching of Science Project		Activity Folder U3-M3-A12	

Unit III

Module 3

Resource Person Directions

ACTIVITY 1 - MODULE OVERVIEW

EQUIPMENT AND MATERIALS

Trainee

Activity Folder U3-M3-A1

Resource Person

None

DIRECTIONS

Trainee

1. Read module overview.

2. If you have questions, ask your Resource Person.

(Continued on next page)

MODE OF INSTRUCTION

(Individual)
Small Group
Resource Person is (is not) needed

Unit III

Module 3

Resource Person Directions

Activity 1 (cont.)

Resource Person

Be available to answer questions.

Unit III

Module 3

Resource Person Directions

ACTIVITY 2 - AN INTRODUCTION TO SCIENCE FOR THE PRESCHOOL

EQUIPMENT AND MATERIALS

Trainee

Activity Folder U3-M3-A2

Resource Person

None

DIRECTIONS

Trainee

1. Read the activity.

2. Fill in the chart.

(Continued on next page)

MODE OF INSTRUCTION

(Individual)		
Small Group		
Resource Person	(is) / Is not	needed

Unit III

Module 3

Resource Person Directions

Activity 2 (cont.)

Trainee

3. Go over the chart with your Resource Person

Resource Person

1. Go over the activity.

2. Be available to answer questions.

Unit III

Module 3

Resource Person Directions

ACTIVITY 3 - HOW TO START TO PLAN YOUR SCIENCE PROJECT FOR PRESCHOOL CHILDREN

EQUIPMENT AND MATERIALS

Trainee

Activity Folder U3-M3-A3

Resource Person

None

DIRECTIONS

Trainee

1. Read the activity.

2. Read your chart from Activity 2.

MODE OF INSTRUCTION

(Individual)
Small Group
Resource Person (is) is not needed

Unit III

Module 3

Resource Person Directions

Activity 3 (cont.)

Trainee (cont.)

3. Select your topic from the chart.

4. Tell your Resource Person what topic you have selected.

Resource Person

1. Read over the activity.

2. Write down what topic each trainee has selected for a Science Project.

3. Be available to answer questions.

Unit III

Module 3

Field Supervisor Directions

ACTIVITY 4 - LEARNING THE CONTENT FOR YOUR PROJECT

PURPOSE OF THE ACTIVITY

1. To acquaint trainees with the resources available for planning science projects.

2. To have trainees learn what content should be taught to preschool children about the topic of their project.

3. To have trainees identify and write down the major understandings to be taught in their science project.

DIRECTIONS

1. When your trainee contacts you, set up a time to visit the individual at their center.

2. Read what the trainee has written about the content for their project.

Unit III

Module 3

Field Supervisor Directions

Activity 4 (cont.)

Directions (cont.)

3. Look to see if the content is appropriate for preschool children.

4. Check to make sure that the trainee has included the major understandings of the content.

5. Check the resource books the trainee used as your criteria for Item #4.

6. The trainee will have mastered the activity when she has demonstrated that (a) the science content selected is appropriate for preschool children and (b) she has selected the major understandings to be taught to young children.

7. Trainee has mastery of this activity if:

   The major ideas are listed and are appropriate for the topic and the preschool children.

Unit III

Module 3

Resource Person Directions

ACTIVITY 5 - WRITING OBJECTIVES FOR YOUR SCIENCE PROJECT

EQUIPMENT AND MATERIALS

Trainee

Activity Folder U3-M3-A5

Resource Person

None

DIRECTIONS

Trainee

1. Read the activity.

2. Write your objectives.

(Continued on next page)

MODE OF INSTRUCTION

Individual

Small Group

Resource Person is needed / is not

Unit III

Module 3

Resource Person Directions

Activity 5 (cont.)

Trainee

3. Go over your objectives with your Resource Person.

4. Place the objectives in your science project folder.

Resource Person

1. Read over Activity 5.

2. Be available to answer questions.

3. Be available to look over their objectives. Use the following criteria to judge the acceptability of their objectives:

   Each objective should tell you:

   1. Who is being taught
   2. What is being taught;
   3. How you will know if it's been taught.

Unit III

Module 3

Resource Person Directions

ACTIVITY 6 - WRITING LESSON PLANS FOR YOUR SCIENCE PROJECT

EQUIPMENT AND MATERIALS

Trainee

Activity Folder U3-M3-A6

Resource Person

None

DIRECTIONS

Trainee

1. Read the activity.

2. Notify your Resource Person of how long you think the project will take.

(Continued on next page)

MODE OF INSTRUCTION

(Individual)		
Small Group		
Resource Person	(is) / is not	needed

Unit III

Module 3

Resource Person Directions

Activity 6 (cont.)

Trainee (cont.)

3. Write it down in your science project folder.

4. Select the lessons for your project and write them on the lesson list.

5. Go over the list with your Resource Person.

6. Write lesson plans for each lesson on your list of lessons.

Resource Person

1. Read over Activity 6.

2. Check with trainee and write down next to the trainee's topics how long the project will take.

3. Check over their list of lessons to be sure they will be appropriate for the project.

Unit III

Module 3

Resource Person Directions

ACTIVITY 7 - WRITING ACTIVITY CARDS FOR YOUR PROJECT

EQUIPMENT AND MATERIALS

Trainee

Activity Folder U3-M3-A7

Activity Cards

Resource Person

Activity Cards - 5 cards per trainee. Have extras available.

DIRECTIONS

Trainee

1. Read Activity 7.

2. Make up your activity list and go over it with your Resource Person.

MODE OF INSTRUCTION

(Individual)

Small Group

Resource Person (is) needed

is not

Activity 7 (cont.)

Trainee (cont.)

3. Write an activity card for each activity on your list.

Resource Person

1. Read over Activity 7.

2. Go over with the trainee his activity list. Check to make sure they are appropriate for topic of science project.

3. Be available to answer questions.

Unit III

Module 3

Resource Person Directions

ACTIVITY 8 - WRITING ENVIRONMENTAL CONDITIONS CARDS FOR YOUR SCIENCE PROJECT

EQUIPMENT AND MATERIALS

Trainee

Activity Folder U3-M4-A8

Environmental condition cards

Resource Person

Environmental condition cards - 5 per trainee. Have extras available.

DIRECTIONS

Trainee

1. Read Activity 8.

(Continued on next page)

MODE OF INSTRUCTION

Individual

Small Group

Resource Person is needed / is not

Resource Person Directions

Activity 8 (cont.)

Trainee (cont.)

2. Make up your environmental condition list and go over it with your Resource Person.

3. Write an environmental condition card for each environmental condition in your list.

Resource Person

1. Read over Activity 8.

2. Go over trainee's environmental condition list. Check to make sure they are appropriate for topic of the science project

3. Be available to answer questions.

Unit III

Module 3

Resource Person Directions

ACTIVITY 9 - CHECKING EVERYTHING OUT

EQUIPMENT AND MATERIALS

Trainee

Activity Folder U3-M3-A9

Lesson cards, activity cards, and environmental condition cards.

Resource Person

Extra Lesson cards, activity cards and environmental condition cards.

DIRECTIONS

Trainee

1. Read Activity 9.

(Continued on the next page)

MODE OF INSTRUCTION

(Individual)

Small Group

Resource Person (is) is not needed

Unit III

Module 3

Resource Person Directions

Activity 9 (cont.)

Trainee

2. Check out the lesson, activity and environmental condition to make sure they are teaching for your objectives.

3. If you have no lesson, activity or environmental condition for an objective, decide on some and write the appropriate cards for them.

4. Go over objectives with your Resource Prson.

Resource Person

1. Read over Activity 9.

2. Have available lesson , activity and environmental condition cards for any trainee who needs them.

3. Go over objectives with trainee to make sure there are lessons, activities and environmental conditions for each objective.

Unit III

Module 3

Resource Person Directions

ACTIVITY 10- THINKING ABOUT INFORMAL LEARNING EXPERIENCES FOR YOUR SCIENCE PROJECT

EQUIPMENT AND MATERIALS

Trainee

Activity Folder U3-M3-A10

Resource Person

None

DIRECTIONS

Trainee

1. Read Activity 10.

2. Make a list of informal learning experiences that are appropriate for your Science Project.

(Continued on next page)

MODE OF INSTRUCTION

(Individual)

Small Group

Resource Person (is) / is not needed

Unit III

Module 3

Resource Person Directions

Activity 10 (cont.)

3. Go over your list with the Resource Person.

Resource Person

1. Read over Activity 10.

2. Be available to answer questions.

3. Go over informal learning experiences list with trainee. Make sure the experiences are appropriate for the science project.

Unit III

Module 3

Field Supervisor Directions

ACTIVITY 11 - PREPARING TO BEGIN TEACHING YOUR SCIENCE PROJECT

PURPOSE OF THE ACTIVITY

1. To give trainees an opportunity to gather together all of the equipment and materials needed to teach their science project.

2. To give trainees an opportunity to schedule when and in what order they will teach the lessons, activities and environmental conditions for their science project.

DIRECTIONS

1. When your trainee contacts you, set up a time to visit the individual at their center.

2. Review their list of equipment and materials with them. Make sure the trainee can tell you what lessons or activities or environmental conditions the material or equipment will be used for.

Field Supervisor Directions

Activity 11 (cont.)

3. Check to make sure that all of the pieces of equipment and materials are there and are in good condition.

4. Go over the calendar with the trainee. Make sure the lessons, activities and environmental conditions are in a logical and sequential order. Make sure the activities and environmental conditions seem to be appropriate for the lessons taught and vice versa.

5. This is the final check point for the plans for teaching the science project. Go over the content for the project, the objectives for the project, the lessons, activities and environmental conditions for the project, the informal learning experiences for the project, the materials and equipment for the project and the calendar to make sure they all dovetail.

6. When everything is in order (See item #5). Discuss with the trainee when he will begin teaching the science project.

Unit III

Module 3

Field Supervisor Directions

ACTIVITY 12 - TEACHING YOUR SCIENCE PROJECT

PURPOSE OF THE ACTIVITY

1. To see if the trainee can implement the science project plans.

DIRECTIONS

1. After the trainee has contacted you, set up a time to visit the individual at their center.

2. Arrange a separate time to visit for observing a lesson, an activity and an environmental condition.

3. The trainee should have available for you:

   A. The objectives for the science project and the lesson plan when you go to observe the lesson.

   B. The objectives and activity card when you observe the activity.

Field Supervisor Directions

Activity 12 (cont.)

C. The objectives and environmental conditions card when you observe the environment.

4. The criteria for mastery of the lesson are:

A. The lesson is appropriate for the science project;

B. The lesson is appropriate for one or more of the objectives for the science project;

C. The lesson was well planned and prepared;

D. The lesson was carried out according to the plans.

5. The criteria for mastery of the activity are:

A. The activity is appropriate for the topic

Field Supervisor Directions

Activity 12 (cont.)

B. The activity meets one or more of the objectives for the science project;

C. The activity was well prepared and planned;

D. The activity was carried out according to the activity card.

6. The criteria for mastery of the environmental condition are:

A. The environmental condition is appropriate for the topic;

B. The environmental condition meets one or more of the objectives for the science project;

C. The environmental condition was well prepared and planned;

Field Supervisor Directions

Activity 12 (cont.)

D. The environmental condition was carried out according to the environmental condition card.

7. Mastery for the module is 85% for each area - 85% mastery of the lesson, 85% mastery of the activity and 85% mastery of the environmental condition. Trainee must have at least 85% mastery in each to have module mastery.

Unit III

Module 3

TRAINEE ACTIVITY RECORD

ACTIVITY	EQUIPMENT AND MATERIALS	COM-PLETED	TIME	COMMENTS, PROBLEMS OR SPECIAL PLANS
1. Module Overview	Activity Folder U3-M3-A1			
2. An Introduction To Science For Preschool	Activity Folder U3-M3-A2			
3. How To Start To Plan Your Science Project To Preschool Children	Activity Folder U3-M3-A3			
4. Learning The Content For Your Project	Activity Folder U3-M3-A4			
5. Writing Object For Your Science Project	Activity Folder U3-M3-A5			
6. Writing Lesson Plans For Your Science Project	Activity Folder U3-M3-A6			

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ACTIVITY	EQUIPMENT AND MATERIALS	COM-PLETED	TIME	COMMENTS, PROBLEMS OR SPECIAL PLANS
7. Writing Activity Cards For Your Science Project	Activity Folder U3-M3-A7 Activity Cards			
8. Writing Environmental Condition Cards For Your Science Project	Activity Folder U3-M3-A8 Environmental Conditions Cards			
9. Checking Everything Out	Activity Folder U3-M3-A9 Activity Cards Environmental Conditions Cards			
10. Thinking About Informal Learning Experiences For Your Science Project	Activity Folder U3-M3-A10			
11. Preparing To Begin Teaching CA/I F.A.	Activity Folder U3-M3-A11			
12. Mastery Teaching Of Your Science Project	Activity Folder U3-M3-A12			

Unit III

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Trainee Directions

GLOSSARY

1. Classifying - Children see that things are grouped according to the most obvious feature such as putting all of the blocks together that are square. Square is the classification for grouping the blocks.

2. Comparing and Contrasting - Children see what is alike about things. Children see what is different about things.

3. Science - Science is an attempt to understand things that exist or happen in the world around us. It is also a way of trying to understand why things happen the way they do.

Unit III

Module 3

Trainee Directions

Glossary

4. Seeing Patterns - Children see that although objects can be different there is at least one thing about all of them that is the same.

Unit III

Module 3

Trainee Directions

ACTIVITY 1 - MODULE OVERVIEW

EQUIPMENT AND MATERIALS

Activity Folder U3-M3-A1

DIRECTIONS

1. Read module overview.

2. If you have questions, ask your Resource Person.

MODE OF INSTRUCTION

(Individual)

Small Group

Resource Person is (is not) needed

Unit III

Module 3

ACTIVITY 1

MODULE OVERVIEW

This module is about teaching science to preschool children. It is about helping children organize what they learn about science so that it has meaning to them.

In this module you will learn:

- What science is;
- What you can teach a preschool child about science;
- How to plan and develop a project for teaching science in a preschool;
- How to carry out a science project in your classroom.

You will be learning these things because as a teacher, your job is to help children understand their world in as many different ways as possible. Science is one way for children to understand their world. Social studies is another way for children to understand their world. Math is another. Each

Activity 1 (cont.)

subject views the world in a different way. As children grow and develop, they will learn more about themselves, others, and their physical world. Our task is to help them begin to understand these things in a way that has meaning to them.

Unit III

Module 3

Trainee Directions

ACTIVITY 2 - AN INTRODUCTION TO SCIENCE FOR THE PRESCHOOL

EQUIPMENT AND MATERIALS

Activity Folder U3-M3-A2

DIRECTIONS

1. Read the activity.

2. Fill in the chart.

3. Go over the chart with your Resource Person.

MODE OF INSTRUCTION

(Individual)		
Small Group		
Resource Person	(is) / is not	needed

Unit III

Module 3

ACTIVITY 2

AN INTRODUCTION TO SCIENCE FOR THE PRESCHOOL

What is science? Science is two things. First, it is an attempt to understand things that exist or happen in the world around us. Second, it is a way of trying to understand why things happen the way they do.

The kind of things that science tries to understand are:

- Living things - animals and plants
- Matter and energy - objects, machines
- Stars and universe - moving in air and space
- Earth's crust - weather, rocks, seasons

For a preschool child, science can be beginning to learn what some of the things in science are called. It can also be the

Activity 2 (cont.)

beginning of learning what are some of the things that exist and happen in science. For a preschool child, learning how plants grow, what they are called and what happens to plants when you do things to them is learning about science. Learning about stars, the moon and weather are other things preschool children can learn about in science.

But what about the other part of science? For science is not only what to learn about, it is also a way of learning about things. This is sometimes called the "Scientific Method". For preschool children, the way of learning about things in science is by learning to observe, to experiment and to predict. If, for example, we wanted to teach children about plants, first we would teach them what they are and what they are made up of. Then, we would teach them to observe plants so they can see what the parts of plants are and how they grow and change. We would teach them how to experiment with plants by seeing what happens to plants if we don't water them or if

Activity 2 (cont.)

we water them too much. We would teach them to predict by asking them to guess what might happen if we don't water plants. We would ask them this before we experimented with watering. Then they could see if their prediction was right. They could observe whether or not their prediction was right. They could experiment to find out if their prediction was right. This is how we teach the scientific method to preschool children.

We must remember how preschool children learn. They learn by seeing, touching, smelling and hearing. We can only teach preschool children what is real to them. Things that they see and know about are real to them. We must, therefore, take what is considered a part of science and see what preschool children can learn about it. For example, we wanted to teach preschool children about the earth's crust and we know that part of learning about the earth's crust is learning about weather, what would we teach a preschool child about weather? We would teach them the names for different kinds of weather and what weather is. We would have them observe different kinds of

Activity 2 (cont.)

weather. We would have them experiment with some kinds of weather such as bringing snow into a warm classroom to find out what happens to it. We would have them predict what might happen to the snow when they bring it into a warm place.

On the next page is a chart of the things that are seen as a part of science. The chart tells you what each of those things involve. Select one thing under each part on the chart. Then write what you would teach the child in the preschool. Next, write what you would have her or him observe, experiment and predict about each thing. Write these things in the right spaces on the chart.

Remember, we teach preschool children what they know about.

If you need help, ask your Resource Person.

Activity 2 (cont.)

STARS AND UNIVERSE Sun and earth Day and night Stars and earth Moon and earth	I WOULD TEACH THE CHILD THE FOLLOWING THINGS ABOUT _____: 1. 2. 3.	I WOULD HAVE THE CHILD OBSERVE: I WOULD HAVE THE CHILD EXPERIMENT BY: I WOULD HAVE THE CHILD PREDICT ABOUT:
EARTH'S CRUST Rocks Weather Seasons Bodies of water	I WOULD TEACH THE CHILD THE FOLLOWING THINGS ABOUT _____ 1. 2. 3.	I WOULD HAVE THE CHILD OBSERVE: I WOULD HAVE THE CHILD EXPERIMENT BY: I WOULD HAVE THE CHILD PREDICT ABOUT:

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LIVING THINGS Plants Animals People	I WOULD TEACH THE CHILD THE FOLLOWING THINGS ABOUT_____: 1. 2. 3.	I WOULD HAVE THE CHILD OBSERVE: I WOULD HAVE THE CHILD EXPERIMENT BY: I WOULD HAVE THE CHILD PREDICT ABOUT:
MATTER AND ENERGY Sound Energy Magnetism Machines	I WOULD TEACH THE CHILD THE FOLLOWING THINGS ABOUT_____: 1 2. 3.	I WOULD HAVE THE CHILD OBSERVE: I WOULD HAVE THE CHILD EXPERIMENT BY: I WOULD HAVE THE CHILD PREDICT ABOUT:

Activity 2 (cont.)

When you have finished your chart, go over it with your Resource Person. Share it with others. They might not have selected the same thing in each area.

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Module 3

Trainee Directions

ACTIVITY 3 - HOW TO START TO PLAN YOUR SCIENCE PROJECT FOR PRESCHOOL CHILDREN

EQUIPMENT AND MATERIALS

Activity Folder U3-M3-A3

DIRECTIONS

1. Read the activity.

2. Read your Chart from Activity 2.

3. Select your topic from the chart.

4. Tell your Resource Person what topic you have selected.

MODE OF INSTRUCTION

(Individual)		
Small Group		
Resource Person	(is)	needed
	is not	

Unit III

Module 3

ACTIVITY 3

HOW TO START TO PLAN YOUR SCIENCE PROJECT FOR PRESCHOOL CHILDREN

For the rest of this module, you will be learning how to plan for and teach a science project to your class. Science is something that should be an ongoing part of every classroom. Because it takes time for children to learn about things that grow or weather or seasonal changes, science lends itself to being taught through projects. Let us now look at what a science project is and what it is made up of.

WHAT IS A SCIENCE PROJECT?

A science project is a plan for organizing lessons, activities and environmental conditions based on one science theme or topic and implementing it. It can last from one to four weeks. It teaches both the knowledge and skills of science.

HOW DO YOU PLAN A SCIENCE PROJECT?

After you have selected a science theme or topic, you must:

Activity 3 (cont.)

1. Learn and write down all of what you want the children to learn about the topic. You find this out by reading books on the topic.

2. Decide and write down what your objectives are for the children to know about the topic.

3. Decide and write down what your objectives are for the children for developing science skills in your project.

4. Decide and write down how long the project will take.

5. Write some lesson plans for lessons about the topic.

6. Write some activity cards for activities about the topic.

7. Write some environmental condition cards for planning the environment around the topic.

Activity 3 (cont.)

8. Write down some ways you can teach and talk about the topic during the non-instructional parts of the day.

Each activity in this module will be developing a part of the plan for your science project. It would be a good idea for you to set up a folder or notebook for keeping each part of your plan so that when you are finished with the module you will have a complete plan for your project. The mastery for this module will be your implementing your plan.

HOW DO I CHOOSE A SCIENCE PROJECT?

Look at your chart from Activity 2. Look at the four areas of science and what they are composed of. Select your topic from the things listed on the chart. You can pick a topic you already know something about or a topic that you are interested in or you can do both. Learning about seasons or weather or plants are all good topics for a science project.

Activity 3 (cont.)

Check with other trainees in your center. Each trainee from a center must do a different project. It is all right to have more than one project going on at a time.

Let your Resource Person know what your topic is going to be. Make sure it is something you really want to do. Once you have selected your topic, you will not be able to change it very easily.

Unit III

Module 3

Trainee Directions

ACTIVITY 4 - LEARNING THE CONTENT FOR YOUR PROJECT - FIELD ACTIVITY

PURPOSE OF THE ACTIVITY

1. To acquaint you with the resources available for planning science projects.

2. To have you learn what content should be taught to preschool children about the topic of their projects.

3. To have you identify and write down the major understandings to be taught in your science projects.

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Module 3

ACTIVITY 4

LEARNING THE CONTENT FOR YOUR PROJECT

FIELD ACTIVITY

Your field assignment is to go to the library and pick out three science books which will give you the information you need to know for your science project. To do this you should go to the children's section of the library and speak to the librarian. Tell her you want three reference books about whatever your topic is. You can also tell her that you want the books so you can teach a science project to preschool children. There may be books for preschoolers on your topic that you may want to look at.

When you get the books, take the books home and read them. For each book that you read, decide on the things that are most important about your topic and then think about whether or not a preschool child can understand them. Next, write down the things that you have selected about the topic that you think preschoolers can learn. It will probably take up four or five pages - maybe more, but it is important information to have. These pages make up your content paper.

Activity 4 (cont.)

This information will be what you write your lesson plans about and plan activities and environmental conditions from.

When you have done all of the above, tell your Field Supervisor. Make sure you have your books and pages with you when the Field Supervisor comes to see you. She will be looking at your pages to make sure that you have all of the important information about your topic for preschool children to learn.

When your Field Supervisor has approved your content paper, put it in your folder or notebook. Be sure to bring it to class because you will use it for planning other parts of your project.

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Module 3

Trainee Directions

ACTIVITY 5 - WRITING OBJECTIVES FOR YOUR SCIENCE PROJECT

EQUIPMENT AND MATERIALS

Activity Folder U3-M3-A5

DIRECTIONS

1. Read the activity.

2. Write your objectives.

3. Go over your objectives with your Resource Person.

4. Place the objectives in your science project folder.

MODE OF INSTRUCTION

(Individual)

Small Group

Resource Person (is) / is not needed

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Module 3

ACTIVITY 5

WRITING OBJECTIVES FOR YOUR SCIENCE PROJECT

There are three different kinds of objectives to be written for your science project.

1. There are content objectives which say what you want children to learn about the project.

2. There are science skills objectives which say what you want the children to be able to do when they have finished learning about the project. Observing, experimenting, and predicting are the science skills the children will be learning to do. When you write your science skill objectives, you will have to say what you want the children to observe, experiment with and predict.

3. There are also cognitive skill objectives which say what you want the children to be able to develop cognitively while they are doing the project. Classifying, comparing

Activity 5 (cont.)

and contrasting and seeing patterns are the cognitive skills you will want the children to develop. You will say what you want them to see patterns in, compare and contrast and classify about the topic.

Because a project has a theme or topic such as weather, there will be many things you will want them to know about weather. You may want them to know what weather is. You may also want them to know what causes different kinds of weather. You may want them to know what time of the year you have different kinds of weather. Each of these things would be a different objective. Therefore, you will have many content objectives for your project. There will be many things about your topic that you will want your children to observe, experiment with and predict. Therefore, you will have many science skill objectives. There will also be many things in your project that you will want children to classify, compare and contrast and see in patterns. So you will have many cognitive skill objectives for your project.

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Activity 5 (cont.)

You should get your objectives from the content paper you wrote in Activity 4. The objectives are to be written like the objectives you write when you write lesson plans. Get out your content paper from Activity 4,read it over and decide what objectives you will write. On the next page, write your content objectives, science skill objectives and cognitive skill objectives for your project. If you have any questions, ask your Resource Person for help.

Activity 5 (cont.)

SCIENCE PROJECT OBJECTIVES

CONTENT OBJECTIVES (KNOWLEDGE)

1.

2.

3.

4.

5.

6.

SCIENCE SKILL OBJECTIVES (OBSERVING, EXPERIMENTING, PREDICTING)

1.

2.

Activity 5 (cont.)

SCIENCE SKILL OBJECTIVES (OBSERVING, EXPERIMENTING, PREDICTING) (cont.)

3.

4.

5.

6.

COGNITIVE SKILL OBJECTIVES (CLASSIFYING, COMPARING AND CONTRASTING, PATTERNS)

1.

2.

3.

4.

Activity 5 (cont.)

COGNITIVE SKILL OBJECTIVES (CLASSIFYING, COMPARING AND CONTRAST - ING, PATTERNS) (cont.)

5.

6.

Activity 5 (cont.)

When you have finished, go over them with your Resource Person. When you both are satisfied, put them in your folder or notebook. Bring your folder or notebook to class. You will need them for planning the rest of your project.

Unit III

Module 3

Trainee Directions

ACTIVITY 6 - WRITING LESSON PLANS FOR YOUR SCIENCE PROJECT

EQUIPMENT AND MATERIALS

Activity Folder U3-M3-A6

DIRECTIONS

1. Read the activity.

2. Notify Resource Person of how long you think the project will take.

3. Write it down in your science project folder.

4. Select the lessons for your project and write them on the lesson list.

MODE OF INSTRUCTION

(Individual)

Small Group

Resource Person (is) needed
is not

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Module 3

Trainee Directions

Activity 6 (cont.)

5. Go over the list with your Resource Person.

6. Write lesson plans for each lesson on your list of lessons.

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ACTIVITY 6

WRITING LESSON PLANS FOR YOUR SCIENCE PROJECT

Before you write your lessons plans, you must decide how long your project should be. Get out your content paper and your objectives. Look over all of the things you want to teach your children. Try to figure out how many weeks it will take to teach the children all of the things you want them to know. If you aren't sure, ask your Resource Person for help in making your decision. Write in your science project folder how long your project will take.

When you have made your decision, look at your objectives for your project. Decide which objectives would be good lessons for the children for your project. Be sure to look at all of the objectives. On the next page for lessons, write down all of the lessons you intend to teach for your project. Go over them with your Resource Person. When you are both satisfied, write lesson plans for all of the lessons on your list. If you need more lesson plan sheets, ask your Resource Person for them.

Activity 6 (cont.)

When you have finished, put them in your folder or notebook.

LIST OF LESSONS TO BE TAUGHT FOR MY PROJECT

1.

2.

3.

4.

5.

6.

7.

8.

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Trainee Directions

ACTIVITY 7 - WRITING ACTIVITY CARDS FOR YOUR PROJECT

EQUIPMENT AND MATERIALS

Activity Folder U3-M3-A7

Activity Cards

DIRECTIONS

1. Read activity 7.

2. Make up your activity list and go over it with your Resource Person.

3. Write an activity card for each activity on your list.

MODE OF INSTRUCTION

(Individual)

Small Group

Resource Person (is) is not needed

Unit III

Module 3

ACTIVITY 7

WRITING ACTIVITY CARDS FOR YOUR PROJECT

Get out your list of objectives again. Look over all of them - the content objectives, the science skill objectives, and the cognitive skill objectives. Decide which ones would make good activities for your children. On the next page, make a list of all of the activities you intend to have available for your project. If you have any questions, ask your Resource Person. When you have finished your list, go over it with your Resource Person. When you are both satisfied with it, write out an activity card for each activity on your list. Your Resource Person will give you the cards.

When you are finished, put them in your notebook or folder.

Activity 7 (cont.)

LIST OF ACTIVITIES FOR YOUR SCIENCE PROJECT

1.

2.

3.

4.

5.

6.

7.

8.

Unit III

Module 3

Trainee Directions

ACTIVITY 8 - WRITING ENVIRONMENTAL CONDITIONS CARDS FOR YOUR SCIENCE PROJECT

EQUIPMENT AND MATERIALS

Activity Folder U3-M3-A8

Environmental conditions cards

DIRECTIONS

1. Read Activity 8.

2. Make up your environmental condition list and go over it with your Resource Person.

3. Write an environmental condition card for each environmental condition on your list.

MODE OF INSTRUCTION

(Individual)

Small Group

Resource Person (is) / is not needed

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Module 3

ACTIVITY 8

WRITING ENVIRONMENTAL CONDITION CARDS FOR YOUR SCIENCE PROJECT

Get out your list of objectives again. Look over all of them - the content objectives, the science skill objectives and the cognitive skill objectives. Decide which ones would be good for making charts, or having things on a science table or hanging on the wall. On the next page, make a list of every environmental condition you intend to have for your project. If you any questions ask your Resource Person. When you have finished your list,go over it with your Resource Person. When you are both satisfied with it, write out an environmental condition card for each environmental condition on your list. Your Resource Person will give you the cards.

When you are finished, put them in your notebook or folder.

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Module 3

Activity 8

LIST OF ENVIRONMENTAL CONDITIONS FOR YOUR SCIENCE PROJECT

1.

2.

3.

4.

5.

6.

7.

8.

Unit III

Module 3

Trainee Directions

ACTIVITY 9 - CHECKING EVERYTHING OUT

EQUIPMENT AND MATERIALS

Activity Folder U3-M3-A9

Lesson, activity, and environmental condition cards

DIRECTIONS

1. Read Activity 9.

2. Check out lesson, activity and environmental conditions to make sure they are teaching for your objectives.

3. If you have no lesson, activity or environmental condition for an objective, decide on some and write the appropriate cards for them.

4. Go over objectives with your Resource Person.

MODE OF INSTRUCTION

(Individual)		
Small Group	(is)	
Resource Person	is not	needed

Unit III

Module 3

ACTIVITY 9

CHECKING EVERYTHING OUT

Get out your list of objectives, your lesson list, your activity list and your environmental condition list. Take your lesson list and compare the lessons on the list with your objectives. Next to each objective that the lesson will be teaching, put an L. Next, take your activity list and compare your activities with your objectives. Put an A next to each objective the activity will teach. Do the same thing with your environmental condition list and objectives. Put an EC next to each objective the environmental condition will teach.

Do not worry if you have a L, an A and an EC next to the same objective. Do not worry if you have more than one L, more than one A or more than one EC next to the same objective.

Make sure you have at least one L or A or EC next to each objective. If you do not, look at the objective and decide whether a lesson, activity or environmental condition would be best to teach it. Every objective must have a lesson, or activity or

Activity 9 (cont.)

environmental condition next to it. That is because the objectives tell you what it is you want the children to learn. The only way children can learn something that has been planned is through a lesson, an activity or an environmental condition.

Once you have decided on a lesson, activity or an environmental condition for that objective, write a lesson plan or an activity card or an environmental condition card for that objective. Put the right intial next to the objective.

Your Resource Person will give you the right cards.

Unit III

Module 3

Trainee Directions

ACTIVITY 10 - THINKING ABOUT INFORMAL LEARNING EXPERIENCES FOR YOUR SCIENCE PROJECT

EQUIPMENT AND MATERIALS

Activity Folder U3-M3-A10

DIRECTIONS

1. Read Activity 10.

2. Make a list of informal learning experiences that are appropriate for your science project.

3. Go over your list with the Resource Person.

MODE OF INSTRUCTION

(Individual)		
Small Group	(is)	
Resource Person		needed
	is not	

Unit III

Module 3

ACTIVITY 10

THINKING ABOUT INFORMAL LEARNING EXPERIENCES FOR YOUR SCIENCE PROJECT

There are many times during the school day that you can talk to the children about things that have to do with your project. Can you think of any of these times? What about snack time or lunch time or when the children are waiting to go outside? These are good times to point out certain things about the project. If for example, you are doing a project on weather, snack time might be a good time to talk about the weather outside that day, and what kinds of clothes were worn to school because of the weather. While the children are outside playing, you might talk about how you are feeling because of the weather or how the weather helps us enjoy playing. You can also talk about why the weather keeps us from going outside to play.

These kinds of things cannot be planned. They are talked about if it seems to be the right thing to do at that time. But you can think about it ahead of time. You can think about how you

Activity 10 (cont.)

can use routine times for learning experiences for the children that have to do with your project. On the next page is a chart with all of the times during the day that no formal or planned experiences take place. Next to the time, write some of the things you can talk about with the children about your project.

When you are finished, go over them with your Resource Person. When you are both satisfied, put it in your folder or notebook. You will want to look at it when you teach your project.

Activity 10 (cont.)

TIME OF DAY	WHAT I WOULD TALK ABOUT
Snack Time	1. 2. 3. 4. 5.
Lunch Time	1. 2. 3. 4. 5.

Activity 10 (cont.)

Toilet Times	1. 2. 3. 4. 5.
Outdoor Play Time	1. 2. 3. 4. 5.

Activity 10 (cont.)

Conversation or Circle Time	1. 2. 3. 4. 5.

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Module 3

Trainee Directions

ACTIVITY 11 - PREPARING TO BEGIN TEACHING YOUR SCIENCE PROJECT

FIELD ACTIVITY

PURPOSE OF THE ACTIVITY

1. To give you an opportunity to gather together all of the equipment and materials needed to teach your science project.

2. To give you an opportunity to schedule when and in what order you will teach the lessons, activities and environmental conditions for your science project.

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Module 3

ACTIVITY 11

PREPARING TO BEGIN TEACHING YOUR PROJECT

FIELD ACTIVITY

For this activity you will get together all of the materials and equipment you will need for your project. Get out your folder or notebook. Pull out your lesson plans, activity cards and environmental condition cards. They should tell you what materials and equipment you will need for your project. Make a list of all of the materials you will need. When your Field Supervisor approves your list get all the materials and equipment together in one place.

Next decide what lesson, activity and environmental condition you will teach during the time you have set aside for your project and in what order you will teach them. On the following page, you will find a calendar. Write down what lessons, activities and environmental conditions you will have for each week of the project.

Activity 11 (cont.)

When you are ready, set up a time to see your Field Supervisor. Go over your calendar and materials and equipment list with her. When you and your Field Supervisor agree that you are ready, you can begin teaching your project. Your calendar, your materials and equipment list and your folder should give you all you need for teaching it.

Make sure you tell your head teacher or center supervisor about the project you will need to do in class.

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Module 3

CALENDAR OF EVENTS FOR YOUR SCIENCE PROJECT

Activity 11 (cont.)

WEEK	WEEK 1	WEEK 2	WEEK 3	WEEK 4
LESSONS				
ACTIVITIES				
ENVIRONMENTAL CONDITIONS				

Unit III

Module 3

Activity 11 (cont.)

MATERIALS AND EQUIPMENT LIST FOR YOUR SCIENCE PROJECT

Unit III

Module 3

Trainee Directions

MASTERY ACTIVITY

ACTIVITY 12 - TEACHING YOUR SCIENCE PROJECT

PURPOSE OF THE ACTIVITY

To see if you can implement the science project plans.

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Module 3

ACTIVITY 12

TEACHING YOUR SCIENCE PROJECT

For this module, mastery will be being observed teaching a lesson, providing an activity, and arranging the environment for your project.

Schedule a time with your Field Supervisor when she can see you teaching a lesson for the project. Give her your objectives list so that she can see what objective you are teaching for and your lesson plan so she can see if your lesson is going the way you planned it.

Schedule another time for your Field Supervisor to observe you providing an activity for your project. Again, have your objectives list available and also your activity card.

Schedule another time for your Field Supervisor to observe your arranging the environment for your science project. Have your objectives list and environmental condition available for her.

Activity 12 (cont.)

Also have your calendar available so your Field Supervisor will know what other lessons and activities and environmental conditions have been carried out or will be carried out. This will give her an idea of what other things are planned in relation to what she is observing.

Make sure you let your head teacher or center director know what you have to do!

UNIT III

MODULE 3

PROBLEM SOLVING

Unit III

Module 3

PROBLEM SOLVING

SESSION ONE

Make a chart on the blackboard just like the chart in Activity 2. Have the trainees fill in the chart for each area under stars and universe, earth's crust, living things and matter and energy. They may refer to their own chart from Activity 2 if they want. Have blank charts available so that when everything has been filled in on the board, each trainee will have a master chart for all science topics appropriate for preschool.

* A blank chart is included so that copies can be made for trainees.

SESSION TWO

Have the trainees exchange and share their content papers for their science projects. Have the trainee identify and write on the blackboard for each content paper what cognitive skill can be developed for each topic and how they can be developed in

Session Two (cont.)

relationship to the topic. Also have the trainees write what can be observed, experimented with and predicted for each topic.

SESSION THREE

Have trainees select a science topic appropriate for preschool. They can refer to their charts from the first problem solving session if they wish. Have the trainees plan a science corner based on the topic they selected. The corner should have:

- materials wh ch are related to the topic that children can manipulate (If topic is plants, there could be seeds in a dish, soil)

- provisions for experimenting that is related to the topic (If topic is plants, they could water some and not water some.)

Session Three (cont)

- things related to the topic which can be observed by the children such as plants, at different levels of growth.

- some signs that say what is going on in that section of science corner.

Encourage the trainees to set up a science corner in their classroom. Encourage them to change the corner every few months but to always have a theme.

Discuss with the trainee the differences between a science project and a science corner. Discuss the value of both.

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Module 3

STARS AND UNIVERSE Sun and earth Day and night Stars and earth Moon and earth	I WOULD TEACH THE CHILD THE FOLLOWING THINGS ABOUT _____: 1. 2. 3.	I WOULD HAVE THE CHILD OBSERVE: I WOULD HAVE THE CHILD EXPERIMENT BY: I WOULD HAVE THE CHILD PREDICT ABOUT:
EARTH'S CRUST Rocks Weather Seasons Bodies of water	I WOULD TEACH THE CHILD THE FOLLOWING THINGS ABOUT _____: 1. 2. 3.	I WOULD HAVE THE CHILD OBSERVE: I WOULD HAVE THE CHILD EXPERIMENT BY: I WOULD HAVE THE CHILD PREDICT ABOUT:

Unit III

Module 3

LIVING THINGS Plants Animals People	I WOULD TEACH THE CHILD THE FOLLOWING THINGS ABOUT_____: 1. 2. 3.	I WOULD HAVE THE CHILD OBSERVE: I WOULD HAVE THE CHILD EXPERIMENT BY: I WOULD HAVE THE CHILD PREDICT ABOUT:
MATTER AND ENERGY Sound Energy Magnetism Machines	I WOULD TEACH THE CHILD THE FOLLOWING THINGS ABOUT_____: 1 2. 3.	I WOULD HAVE THE CHILD OBSERVE: I WOULD HAVE THE CHILD EXPERIMENT BY: I WOULD HAVE THE CHILD PREDICT ABOUT: